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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/439,550	11/12/1999	CHRISTOPHER T. GRASTEIT	ETAK-07735US	1780

23910 7590 07/21/2005

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EXAMINER
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COLBERT, ELLA

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/439,550

**Applicant(s)**

GRASTEIT, CHRISTOPHER T.

**Examiner**

Ella Colbert

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/03/01</u> | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1, 3, 4, and 6-16 are pending. Claims 4, 6, and 15 have been amended in this communication filed 04/19/05 entered as Response to Non-Final Action. The IDS received 12/06/01 has been reviewed and entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,904,727) Prabhakaran in view of (US 6,366,851) Chojnacki et al, hereafter Chojnacki.

With respect to claim 1, Prabhakaran teaches, in a computer, identifying a centroid (col. 3, lines 31-47). Prabhakaran did not teach, defining a plurality of radials extending from said centroid and associating at least one data item relating to the centroid with each of said plurality of radials. Computer code is well known in the art of computer programming and by definition is program instructions. Machine code consists of numerical instructions that the computer can recognize and execute and that were converted from source code.

Chojnacki discloses, defining a plurality of radials extending from said centroid (col. 24, lines 52-67 and fig's. 21C-21D) and associating at least one data item relating to the centroid with each of said plurality of radials (col. 7, lines 19-57). However,

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Prabhakaran does show a radial (a line) extending from a centroid in fig. 2 and fig. 5.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to define at least one radial extending from the centroid and to associate at least one item relating to centroid with the plurality of radials and to modify in Prabhakaran because such a modification would allow Prabhakaran to have a method or process of programmatically assign x and y coordinates (usually no limited to earth coordinates-i.e., latitude and longitude) to records, lists and files containing location information (full addresses, partial addresses, zip codes, census FIPS codes, etc.) for cartographic or any other form of spatial analysis or reference and to have the ability to map data in order to visualize information and explore relationships previously unavailable in strict database or spreadsheet analysis.

4. Claims 3, 4, and 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,904,727) Prabhakaran in view of (US 6,366,851) Chojnacki et al, hereafter Chojnacki and further in view of (US 6,101,496) Esposito .

With respect to claim 3, Prabhakaran and Chojnacki failed to teach, in a computer, identifying a centroid; defining a plurality of radials extending from said centroid; defining a plurality of radials extending from said centroid; and associating at least one data item relating to said centroid with each of said plurality of radials.

Esposito teaches, in a computer, identifying a centroid (col. 6, lines 10-13 and col. 7, lines 1-12); defining a plurality of radials extending from said centroid (col. 1, lines 46-66 and fig. 3-2); associating at least one data item relating to said centroid with each of said plurality of radials (col. 7, line 11- col. 8, line 24).

Prabhakaran and Chojnacki did not teach, interpolating positions on a respective radial, each said position corresponding to a given location.

Esposito discloses, interpolating positions on a respective radial, each said position corresponding to a given location (col. 1, lines 59-67, col. 2, lines 1-45, and col. 6, lines 22-41) and placing a marker at each interpolated of the displayed respective radial (col. 5, lines 1-39 and lines 64-67, col. 6, lines 1-9, and col. 7, lines 39-53). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have interpolating positions on a respective radial, each said position corresponding to a given location and placing a marker at each interpolated of the displayed respective radial and to modify in Prabhakaran and Chojnacki because such a modification would allow Prabhakaran and Chojnacki to have geocoded OI records using current technology for various precision assignments.

With respect to claim 4, Prabhakaran teaches, wherein the marker is any of a point, notch, and icon representative of information associated with each outside data match (col. 5, lines 64-67, col. 6, lines 1-24, and fig. 4(310) and fig. 5).

With respect to claim 6, Prabhakaran and Chojnacki failed to teach, in a computer, identifying a centroid wherein said identifying a centroid includes: identifying said centroid in said database; defining a plurality of radials extending from said centroid; associating at least one data item relating to said centroid with each of said plurality of radials, wherein said associating comprises; associating information in the database with the radials, said information relating to said centroid.

Esposito teaches, in a computer, identifying a centroid wherein said identifying a centroid (col. 6, lines 10-13 and col. 7, lines 1-12) includes: identifying said centroid in said database (col. 5, lines 1-13); defining a plurality of radials extending from said centroid; associating at least one data item relating to said centroid with each of said plurality of radials (col. 5, lines 57), wherein said associating comprises; associating information in the database with the radials, said information relating to said centroid (col. 5, lines 15-57).

Esposito teaches, storing said plurality of radials a database (col. 6, lines 17-25 and fig. 3-1 (21 & 22)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to store the radials in a database and to modify in Prabhakaran and Chojnack because such a modification would allow Prabhakaran and Chojnack to have street side placement and other location information based on anchor points which are known, precisely geocoded records within the OI data set.

With respect to claim 7, Prabhakaran teaches, wherein the database is a geocoded database of mapping information and said data items are locations within an area associated with said centroid (col. 1, lines 50-58).

With respect to claim 8, Prabhakaran, Chojnack, and Esposito did not teach, wherein the database is a database of satellite information, said centroid represents a position on a globe, and said data items are satellites orbiting above an approximate position of said centroid, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a database of satellite information, said centroid representing a position on a globe, and said data items to be satellites

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orbiting above an approximate position of said centroid and to modify in Prabhakaran, Chojnack, and Esposito because such a modification would allow Prabhakaran, Chojnack, and Esposito to have a location, RF signals which contain information indicative of the location of a source of their transmission are received and processed to derive the geographic coordinates of the location and the location in a database to be associated with a mobile computer system so as to form a geocoded entry in the database.

With respect to claim 9, Prabhakaran, Chojnack, and Esposito did not teach, wherein each radial identifies at least one feature of at least one of the satellites, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have each radial identify at least one feature of at least one of the satellites and to modify in Prabhakaran, Chojnack, and Esposito because such a modification would allow Prabhakaran, Chojnack, and Esposito to provide the mobile computer system with current positioning information and to retrieve and to display points of interest having geocodes within a predetermined range.

With respect to claim 10, Prabhakaran and Chojnack did not teach, matching outside data to information associated with said data items and displaying each radial having associated information that matches the outside data. Esposito discloses, matching outside data to information associated with said data items (col. 7, lines 54-67 and col. 8, lines 1-24) and displaying each radial having associated information that matches the outside data (col. 6, lines 22-33 and col. 7, lines 39-49). It would have been obvious to one having ordinary skill in the art at the time the invention was made

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to matching outside data to information associated with the data items and displaying each radial having associated information that matches the outside data and to modify in Prabhakaran and Chojnack because such a modification would allow Prabhakaran and Chojnack to have the database default to the ZIP centroid with the addresses matching the assigned point.

With respect to claim 11, Prabhakaran teaches, wherein the outside data is location information of data stored in the database (col. 5, lines 36-43).

With respect to claim 12, Prabhakaran teaches, in a computer, identifying a centroid; defining a plurality of radial extending from said centroid, wherein said defining a plurality of radials comprises: assigning a direction to each respective radial: associating at least one data item relating to said centroid with each of said plurality of radials;

Prabhakaran and Chojnack did not teach, calculating an endpoint for each respective radial, defining each respective radial from the centroid to its endpoint. Esposito teaches, calculating an endpoint for each respective radial, defining each respective radial from the centroid to its endpoint (col. 7, lines 39-67, col.8, lines 1-20 and lines 29-40, and fig. 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to calculate an endpoint for each respective radial, defining each respective radial from the centroid to its endpoint and to modify in Prabhakaran and Chojnack because such a modification would allow Prabhakaran and Chojnack to have the number of pinpointed x,y (z) addresses in the geocoding



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georeferenced library with the ability to interpolate from the addresses near or the exact street containing the vector of the address ranges.

With respect to claim 13, Prabhakaran teaches, assigning a direction to each respective radial based on at least one of information and features of the data item associated with the respective radial (col. 13, lines 7-22 and lines 34-54).

With respect to claim 14, Prabhakaran, Chojnack, and Esposito failed to teach, wherein the information and features is at least one of a margin of error with which the centroid identifies a location corresponding to the data item, facilities, including any one of parking, food, and communications associated with the data item, and any other information or features related to the data item, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the information and features to be at least one of a margin of error with which the centroid identifies a location corresponding to the data item, facilities, including any one of parking, food, and communications associated with the data item, and any other information or features related to the data item and to modify in Prabhakaran, Chojnack, and Esposito because such a modification would allow Prabhakaran, Chojnack, and Esposito to have at least one margin of error where the centroid identifies a location corresponding to a data item, facilities, including parking, food, and communications associated with a data item because in a geocoded database the act, method or processes of programmatically assigning x and y coordinates to records, lists and files containing location information for cartographic or any other form of spatial analysis or reference particularly mapping data is well known for being subject to a margin of error.

With respect to claim 15, Prabhakaran and Chojnack failed to teach, in a computer, identifying a centroid; defining a plurality of radials extending from said centroid; associating at least one data item relating to said centroid with each of said plurality of radials, wherein each data item is a location within an area associated with said centroid (col. 2, lines 35-45, col. 4, lines 14-17, and col. 8, lines 29-34). It would have been obvious to one having skill in the art at the time the invention was made to have the associating at least one data item relating to said centroid with each of said plurality of radials, wherein each data item is a location within an area associated with the centroid and to modify in Prabhakaran and Chojnack because such a modification would allow Prabhakaran and Chojnack to have ZIP+4 centroids as a specific street level address in a raw data record. A centroid by definition is "a two-dimensional figure or three dimensional solid. Thus the centroid of a two-dimensional figure represents the point at which if could be cut out of, for example sheet metal. The centroid circle or sphere is its cen generally, the centroid represents the point designated by the mean of the coordinates of all the points in a set" (see enclosed Britannica Concise Encyclopedia reference).

With respect to claim 16, Prabhakaran and Chojnack did not teach, wherein each radial identifies a location within an area of the centroid and a proximity of the location to the centroid. Esposito discloses, wherein each radial identifies a location within an area of the centroid and a proximity of the location to the centroid (col. 3, lines 48-50 and lines 55-66 and col. 7, lines 29-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have each radial

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identify a location within an area of the centroid and a proximity of the location to the centroid and to modify in Prabhakaran and Chojnack because such a modification would allow Prabhakaran and Chojnack to have ZIP+4 centroids as a specific street level address in a raw data record. A centroid by definition is "a two-dimensional figure or three dimensional solid. Thus the centroid of a two-dimensional figure represents the point at which if could be cut out of, for example sheet metal. The centroid circle or sphere is its cen generally, the centroid represents the point designated by the mean of the coordinates of all the points in a set".

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 3, 4, and 6-16 have been considered but are not persuasive.

Issue no. 1 (the main issue): Applicant argues: Applicant respectfully traverses the suggestion that the claimed limitations for claims 1, 3, 4, and 6-16 would have been obvious to one having ordinary skill in the art at the time the invention was made. Applicant respectfully notes that the Office Action thereby engages in impermissible hindsight construction and Applicant respectfully further notes that such general observations regarding the benefits of the invention demonstrate the novelty and patentability of the current claims while failing to offer any a priori motivation to modify Prabhakaran, Chojnacki, and Esposito as suggested, let alone to, in a computer, identify a centroid, to define a plurality of radials extending from said centroid, to associate at least one data item relating to said centroid with each of said plurality of

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radials, to interpolate positions on a respective radial, each said position corresponding to a given location, and to place a marker at each interpolated position of the displayed respective radial, in a computer, identifying a centroid, wherein said identifying a centroid includes: identifying said centroid in a database; defining a plurality of radials extending from said centroid; associating at least one data item relating to said centroid with each of said plurality of radials, wherein said associating comprises: associating information in said database with said plurality of radials, said information relating to said centroid; and storing said plurality of radials in a database has been considered but is not persuasive. Response: In response to applicant's arguments that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

It is assumed that every reference relies to some extent on the knowledge of persons skilled in the art to complement that which is disclosed therein. Further, the skilled artisan is presumed to know something more about the art than only what is disclosed in the applied reference/references. In other words, the person having ordinary skill in the art has a level of knowledge apart from the content of the references. *In re Bode*, 550 F.2d 656, 660, 193 USPQ 12, 16 (CCPA 1977); *In re*

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*Jacoby*, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). A conclusion of obviousness is established "from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference." *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Also see MPEP 2144 entitled "Sources of Rationale Supporting a Rejection Under 35 U.S.C. 103: RATIONALE MAY BE IN A REFERENCE, OR REASONED FROM COMMON KNOWLEDGE IN THE ART, SCIENTIFIC PRINCIPLES, ART – RECOGNIZED EQUIVALENTS, OR LEGAL PRECEDENT."

Further response to Applicant's arguments, it is interpreted that Prabhakaran teaches a computer (fig. 3 (190)), a centroid (fig. 5-map shows a center of a body of its mass (or masses) and a point which is stable), Chojnacki teaches a plurality of radials extending from a centroid in col. 24, lines 52-67 and associating a data item relating to the centroid with the plurality of radials in col. 7, lines 19-57 and Esposito teaches, the interpolating positions on a respective radial in col. 1, lines 59-67, col. 2, lines 1-45, col. 6, lines 22-41 and storing the radials in a database in col. 6, lines 17-25.

Conclusion: The Examiner is entitled to give limitations their broadest reasonable interpretation in light of the Specification (see below):

2111 Claim Interpretation; Broadest Reasonable Interpretation [R-1]

#### >CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE INTERPRETATION

*During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).<*

Applicants' are respectfully requested to point out in the claim(s) and claim language the inventive concept of what is considered to be the invention.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


### ***Inquiries***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 571-272-6741. The examiner can normally be reached on Monday-Thursday, 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 571-272-6747. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
E. Colbert  
July 9, 2005